

To: Liz.Dodge@CH2M.com[Liz.Dodge@CH2M.com]; stanleyedison@navajo-nnsn.gov[stanleyedison@navajo-nnsn.gov]
Cc: Jennifer.Laggan@CH2M.com[Jennifer.Laggan@CH2M.com]; Stuart_Brown@fmi.com[Stuart_Brown@fmi.com]; Chilingaryan, Sona[Chilingaryan.Sona@epa.gov]
From: Ripperda, Mark
Sent: Wed 9/10/2014 4:19:42 PM
Subject: EPA's down hole logging procedure

Hi Liz, here is the narrative description from EPA's work plan at Haystack. EPA went to ten feet in the waste area and put the probe inside a PVC sleeve to lower into the hole. I don't know if they were targeting the highest readings or the lowest or both, but it looks like they were using the probe to guide where to do biased sampling from the cores. I prefer your evenly spaced sampling, and would only use the probe or surface scanning of your cores like you've proposed to look for the bottom of contamination. No matter what, as Kyra says, the borehole or core scanning is only qualitative, so it probably doesn't deserve as much attention as I'm giving it.

Subsurface soil samples will be collected using an EPA-supplied direct-push drill rig, with

disposable acetate liners. The borehole will be advanced to a depth of 10 feet bgs, and the

disposal sleeves containing the soil cores will be place on a plastic-sheet lined table and labeled.

Following the removal of the soil core, a Ludlum 44-62 (0.5 inch by 1 inch) paired with a

Ludlum 2221 meter will be placed within a thin-walled PVC (or similar) pipe with lead-shielded

base and lowered into the borehole to collect static gamma measurements. Based on the static

gamma radiation measurements at regular depth intervals, the soil sample depth will be determined, and the sample will be collected directly from the core.

From: Liz.Dodge@CH2M.com [mailto:Liz.Dodge@CH2M.com]
Sent: Tuesday, September 02, 2014 5:26 PM

To: Ripperda, Mark; stanleyedison@navajo-nsn.gov
Cc: Jennifer.Laggan@CH2M.com; Stuart_Brown@fmi.com
Subject: RE: Ruby Mines Site

We are on track to deliver the Phase 3 workplan to you this Friday Sept 5. If we plan on 2 weeks for you to review it, one week for us to address your comments and two weeks for EPA approval we can be in the field by mid-October.

From: Ripperda, Mark [<mailto:Ripperda.Mark@epa.gov>]
Sent: Tuesday, September 02, 2014 3:34 PM
To: Brown, Stuart; Stanley Edison <stanleyedison@navajo-nsn.gov> (stanleyedison@navajo-nsn.gov)
Cc: Dodge, Liz/BAO; Laggan, Jennifer/DEN
Subject: RE: Ruby Mines Site

OK. I need to plan travel for the next couple months, so do you have an estimate for when you might be in the field for Phase 3?

From: Brown, Stuart [mailto:Stuart_Brown@fmi.com]
Sent: Tuesday, September 02, 2014 2:26 PM
To: Ripperda, Mark; Stanley Edison <stanleyedison@navajo-nsn.gov> (stanleyedison@navajo-nsn.gov)
Cc: Liz.Dodge@CH2M.com; Jennifer.Laggan@CH2M.com
Subject: Ruby Mines Site

Mark – I am travelling tomorrow so let's cancel the call. Liz will be giving you a call regarding a question on the Phase 3 work plan.